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1-53 (Canceled)

54. (Previously presented) A method for detecting an infection of an acid-resistant microorganism in a mammal, comprising:

(a) incubating a stool sample of the mammal with at least two different monoclonal antibodies, fragments or derivatives thereof under conditions allowing formation of complexes between antigens from the acid-resistant microorganism and the antibodies, fragments or derivatives thereof, in which

(aa) a first monoclonal antibody or fragment or derivative thereof specifically binds an epitope of a first antigen, which shows at least with some mammals a structure after intestinal passage that corresponds to a native structure, or a structure which a mammal produces antibodies against after being infected or immunized with the acid-resistant microorganism, an extract or lysate thereof, protein therefrom, a fragment thereof or synthetic peptide;

(ab) a second monoclonal antibody or fragment or derivative thereof specifically binds an epitope of a second antigen, differing from the epitope of the first antigen, which shows at least with some mammals a structure after intestinal passage that corresponds to the native structure, or a structure which a mammal produces antibodies against after being infected or immunized with the acid-resistant microorganism, an extract or lysate thereof, a protein therefrom, a fragment thereof or a synthetic peptide, in which the groups of mammals according to (aa) and (ab) may overlap, and in total essentially make up the overall number of infected, mammals, and

(b) detecting the formation of at least one antigen-antibody complex according to (aa) or (ab).

55. (Previously presented) A method according to Claim 54, in which the microorganism is an acid-resistant bacterium.

56. (Previously presented) A method according to Claim 55, in which the acid-resistant bacterium is a bacterium belonging to the genus *Helicobacter*, the genus *Mycobacterium*, or the genus *Campylobacter*.

57. (Previously presented) A method according to Claim 56 wherein the bacterium is a bacterium belonging to the species *Helicobacter pylori*, the species *Helicobacter hepaticus*, the species *Mycobacterium tuberculosis*, or the species

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*Campylobacter pylori.*

58. (Previously presented) A method according to Claim 54, wherein the epitope of the first antigen is an epitope of a urease and the epitope of the second antigen is an epitope selected from the group consisting of: a heat shock protein, an alkylhydroperoxide-reductase, a 20kDa-protein (3-dehydro-quinase type II), a 16.9kDa-protein (neutrophilactivating protein) and a 33.8kDa protein (fructose-bisphosphate-aldolase).

59. (Previously presented) A method according to Claim 58, wherein the urease is a  $\beta$ -urease of *Helicobacter pylori*.

60. (Previously presented) A method according to Claim 58, wherein the heat shock protein is a Hsp60.

61. (Previously presented) A method according to Claim 58, wherein the alkylhydroperoxide-reductase is the 26kDa-protein of *Helicobacter pylori*.

62. (Previously presented) A method according to Claim 54, wherein the first monoclonal antibody comprises a heavy chain having at least one of the following CDRs: SEQ ID NO:25, SEQ ID NO:26 and SEQ ID NO:27, or SEQ ID NO:28, SEQ ID NO:29 and SEQ ID NO:30.

63. (Previously presented) A method according to Claim 62, wherein the first monoclonal antibody comprises a light chain having at least one of the following CDRs: SEQ ID NO:37, SEQ ID NO:38 and SEQ ID NO:39 or SEQ ID NO:40, SEQ ID NO:41 and SEQ ID NO:42.

64. (Previously presented) A method according to Claim 54, wherein the first monoclonal antibody is obtained from hybridoma HP9.lm/3C2-F8-E2 having accession number DSM ACC2362.

65. (Previously presented) A method according to Claim 54, wherein the second monoclonal antibody comprises a heavy chain having at least one of the following CDRs: SEQ ID NO:1, SEQ ID NO:2, and SEQ ID NO:3.

66. (Previously presented) A method according to Claim 65, wherein the second monoclonal antibody comprises a light chain having at least one of the following CDRs: SEQ ID NO:7, SEQ ID NO:8 and SEQ ID NO:9.

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67. (Previously presented) A method according to Claim 54, wherein the second monoclonal antibody is obtained from hybridoma HP16m/2A5-E6-E8 having accession number DSM ACC2356.

68. (Previously presented) A method according to Claim 54, further comprising:

- (a) incubating the stool sample with a third monoclonal antibody, in which
- (ac) the third monoclonal antibody or fragment or derivative thereof specifically binds an epitope of a third antigen, differing from the epitope of the first and second antigen, which shows at least with some mammals a structure after intestinal passage that corresponds to the native structure, or a structure which a mammal produces antibodies against after being infected or immunized with the acid-resistant microorganism, an extract or lysate thereof, a protein therefrom, a fragment thereof or a synthetic peptide,

in which the groups of mammals according to (aa), (ab) and (ac) may overlap and in total essentially make up the overall number of infected mammals, and

- (b) detecting the formation of at least one antigen-antibody complex according to (aa), (ab) or (ac).

69. (Previously presented) A method according to Claim 68, wherein

the epitope of the first antigen is an epitope of a urease,

the epitope of the second antigen is an epitope selected from the group consisting of: a heat shock protein, an alkylhydroperoxide-reductase, a 20kDa-protein (3-dehydro-quinase type II) a 16.9kDa-protein (neutrophil-activating protein) and a 33.8kDa protein (fructose biphosphate aldolase), and

the epitope of the third antigen is an epitope independently selected from the same group.

70. (Previously presented) A method according to Claim 68, wherein

the epitope of the first antigen is an epitope of a B-urease from *Helicobacter pylori*;

the epitope of the second antigen is an epitope of heat shock protein Hsp60 from *Helicobacter pylori*,

the epitope of the third antigen is an epitope of 20kDa-protein (alkylhydroperoxide-reductase) of *Helicobacter pylori*.

71. (Previously presented) A method according to Claim 68, wherein the third

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monoclonal antibody comprises a heavy chain having at least one of the following CDRs:  
SEQ ID NO:13, SEQ ID NO:14 and SEQ ID NO:15.

72. (Previously presented) A method according to Claim 71, wherein the third monoclonal antibody comprises a light chain having at least one of the following CDRs:  
SEQ ID NO:19, SEQ ID NO:20 and SEQ ID NO:21.

73. (Previously presented) A method according to Claim 68, wherein the third monoclonal antibody is obtained from hybridoma HP15m/3E8-D9-D6 having accession number DSM ACC2355.

74. (Previously presented) A method according to Claim 54, wherein the antigen-antibody complex is detected by an immunological method selected from the group consisting of: ELISA, RIA, Western Blot or an immunochromatographic method.

75. (Previously presented) A method according to Claim 68, wherein the antigen-antibody complex is detected by an immunological method selected from the group consisting of: ELISA, RIA, Western Blot or an immunochromatographic method.

76. (Previously presented) A method according to Claim 54, wherein the antibodies fragments or derivatives are fixed to a support comprising a test strip.

77. (Previously presented) A method for detecting an infection with *Helicobacter pylori* in the stool of a mammal, comprising:

(a) incubating a stool sample with at least two different monoclonal antibodies, fragments or derivatives thereof under conditions allowing antigen-antibody complex formation, in which

(aa) a first monoclonal antibody, fragment or derivative thereof specifically binds  $\beta$ -urease or a fragment thereof;

(ab) a second monoclonal antibody, fragment or derivative thereof specifically binds the 26kDa-antigen or a fragment thereof or specifically binds Hsp60 or a fragment thereof, and

(b) detecting the formation of at least one antigen-antibody complex as set out in (aa) or (ab).

78. (Previously presented) A method according to Claim 76, wherein the first monoclonal antibody comprises a heavy chain having at least one of the following CDRs:  
SEQ ID NO:25, SEQ ID NO:26 and SEQ ID NO:27, or SEQ ID NO:28, SEQ ID NO:29

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and SEQ ID NO:30.

79. (Previously presented) A method according to Claim 77, wherein the first monoclonal antibody comprises a light chain having at least one of the following CDRs: SEQ ID NO:37, SEQ ID NO:38 and SEQ ID NO: 39 or SEQ ID NO:40, SEQ ID NO:41 and SEQ ID NO:42.

80. (Previously presented) A method according to Claim 76, wherein the first monoclonal antibody is obtained from hybridoma HP9.lm/3C2-F8-E2 having accession number DSM ACC2362.

81. (Previously presented) A method according to Claim 76, wherein the second monoclonal antibody comprises a heavy chain having at least one of the following CDRs: SEQ ID NO:1, SEQ ID NO:2, and SEQ ID NO:3.

82. (Previously presented) A method according to Claim 80, wherein the second monoclonal antibody comprises a light chain having at least one of the following CDRs: SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:9.

83. (Previously presented) A method according to Claim 76, wherein the second monoclonal antibody is obtained from hybridoma HP16m/2A5-E6-45 having accession number DSM ACC2356.

84. (Previously presented) A method according to Claim 76, further comprising:

(a) incubating the stool sample with (ac) a third monoclonal antibody, fragment or derivative thereof, which specifically binds 26kDa-antigen or a fragment thereof; and

(b) detecting the formation of at least one antigen-antibody complex as set out in (aa), (ab) or (ac).

85. (Previously presented) A method according to Claim 84, wherein the third monoclonal antibody comprises a heavy chain having at least one of the following CDRs: SEQ ID NO:13, SEQ ID NO:14 and SEQ ID NO:15.

86. (Previously presented) A method according to Claim 85, wherein the third monoclonal antibody comprises a light chain having at least one of the following CDRs: SEQ ID NO:19, SEQ ID NO:20 and SEQ ID NO:21.

87. (Previously presented) A method according to Claim 84, wherein the third

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monoclonal antibody is obtained from hybridoma HP15m/3E8-D9-D6 having accession number DSM ACC2355.

88. (Previously presented) A method according to Claim 77, wherein the antigen-antibody complex is detected by an immunological method selected from the group consisting of:

ELISA, RIA, Western Blot or an immunochromatographic method.

89. (Previously presented) A method according to Claim 84, wherein the antigen-antibody complex is detected by an immunological method selected from the group consisting of:

ELISA, RIA, Western Blot or an immunochromatographic method.

90. (Previously presented) A method according to Claim 88, wherein the antibodies, fragments or derivatives are fixed to a support comprising a test strip.

91. (Previously presented) A method according to Claim 89, wherein the antibodies, fragments or derivatives are fixed to a support comprising a test strip.

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